

WHAT IS CLAIMED IS:

1. A process for producing display device particles having positive or negative chargeability and having color, comprising:

at least an emulsification step in which calcium carbonate is added as an emulsifying auxiliary to a display device particle-forming composition that contains at least a colorant and a polymerizable monomer or a resin,

wherein the emulsifying auxiliary is calcium carbonate coated with a hydrophilic organic material, an average dispersed particle size of the emulsifying auxiliary present in an aqueous medium ranges from 0.05 to 1 μm , and a variation coefficient of the dispersed particle sizes is 60% or less.

2. The process for producing display device particles according to claim 1, wherein the hydrophilic organic material is a polymer having a carboxyl group.

3. The process for producing display device particles according to claim 1, wherein the emulsifying auxiliary is added in an amount ranging from 2 to 100% by weight of the display device particle-forming composition.

4. The process for producing display device particles according to claim 1, wherein the emulsifying rate during the emulsification step ranges from 5 to 30 m/s.

5. The process for producing display device particles according to claim 1, wherein the emulsifying auxiliary is removed from the emulsified product obtained through the emulsification step.

6. Display device particles having positive or negative chargeability and having color, produced through at least an emulsification step in which calcium carbonate is added as an emulsifying auxiliary to a display device particle-forming composition that contains at least a colorant and a polymerizable monomer or a resin,

wherein the emulsifying auxiliary is calcium carbonate coated with a hydrophilic organic material, an average dispersed particle size of the emulsifying auxiliary present in an aqueous medium ranges from 0.05 to 1 μm , and a variation coefficient of the dispersed particle sizes is 60% or less.

7. The display device particles according to claim 6, wherein the hydrophilic organic material is polyvinyl alcohol.

8. An image-display medium comprising a pair of substrates arranged to face each other and particle groups made up of two or more kinds of particles and sealed in a void between the pair of substrates, in which at least one of the particle groups has positive chargeability, at least one of the other particle groups has negative chargeability, and the at least one of the former particle groups and the at least one of the latter

particle groups have mutually different colors,

wherein the particles having positive and negative chargeability are produced through at least an emulsification step in which calcium carbonate is added as an emulsifying auxiliary to a display device particle-forming composition that contains at least a colorant and a polymerizable monomer or a resin, and

wherein the emulsifying auxiliary is calcium carbonate coated with a hydrophilic organic material, an average dispersed particle size of the emulsifying auxiliary present in an aqueous medium ranges from 0.05 to 1 μm , and a variation coefficient of the dispersed particle sizes is 60% or less.

9. The image-display medium according to claim 8, wherein a material for the substrates is selected from the group consisting of aluminum, stainless steel, nickel, chromium, alloy crystals thereof, Si, GaAs, GaP, GaN, SiC, and ZnO.

10. The image-display medium according to claim 8, wherein the substrates are produced by subjecting to an electrically conducting treatment an insulating material selected from the group consisting of a polymer film, glass, quartz and ceramics.

11. The image-display medium according to claim 8, wherein the substrates comprise a transparent conductive material selected from the group consisting of indium tin oxide, zinc oxide, tin oxide, lead oxide,

indium oxide, and copper iodide.

12. The image-display medium according to claim 8, wherein the substrates have disposed thereon protective layers made of a material selected from the group consisting of polycarbonate resin, vinyl silicone resin and fluorine-group containing resin.

13. The image-display medium according to claim 8, wherein the particles having positive or negative chargeability have a central particle size ranging from 3 to 30 μm .

14. An image-forming device for forming an image in an image-display medium comprising a pair of substrates arranged to face each other and particle groups made up of two or more kinds of particles and sealed in a void between the pair of substrates, in which at least one of the particle groups has positive chargeability, at least one of the other particle groups has negative chargeability, and the at least one of the former particle groups and the at least one of the latter particle groups have mutually different colors,

wherein the particles having positive and negative chargeability are produced through at least an emulsification step in which calcium carbonate is added as an emulsifying auxiliary to a display device particle-forming composition that contains at least a colorant and a polymerizable monomer or a resin,

wherein the emulsifying auxiliary is calcium carbonate coated with

a hydrophilic organic material, an average dispersed particle size of the emulsifying auxiliary present in an aqueous medium ranges from 0.05 to 1 μm , and a variation coefficient of the dispersed particle sizes is 60% or less, and

wherein an electric field generating unit is provided in order to generate in the void between the pair of substrates an electric field corresponding to the image.